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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/382,438 | 08/25/1999 | WILLIAM R. GARDNER | QCPA990482 | 5232 |

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Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

| EXAMINER | |
|---|---|
| RYMAN, DANIEL J | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2665 | |

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/382,438 | GARDNER ET AL. | |
| | Examiner | Art Unit | |
| | Daniel J. Ryman | 2665 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *09 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *10-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 2/9/2004 have been fully considered but they are not persuasive. On pages 7-8 and 11 of the Response, Applicant argues, with respect to claims 10, 17, and 20, that Tiedemann does not show having a plurality of frequency bins. Examiner, respectfully, disagrees. In Fig. 7 and col. 5, lines 16-26, Tiedemann discloses that the forward link (forward CDMA channel) contains a plurality of forward packet channels. These forward packet channels are interpreted by Examiner to read on the "plurality of forward link frequency bins". Thus, Examiner maintains that Tiedemann discloses having a plurality of forward frequency bins (forward packet channel) on a forward link (forward CDMA channel).

2. Applicant further argues on page 8 of the Response that Tiedemann does not show allocating the bandwidth for the forward link and the reverse link differently. Again, Examiner, respectfully, disagrees. Examiner submits that the claim limitation, "wherein the forward link frequency bins and the at least one reverse link frequency bin are designated such that bandwidth of the forward link is allocated differently from bandwidth of the reverse link", only requires that there be a single difference between the bandwidth allocations of the forward link bins and the reverse link bins. Tiedemann discloses that the reverse packet channels can be variable rate packet channels (col. 5, lines 1-5). Tiedemann also discloses that the one or more reverse packet channels may be assigned to a single forward packet channel (col. 5, lines 27-39). Both of these features disclose, or at the very least suggest, differences in bandwidth allocations between the forward link bins and the reverse link bins. By having the reverse link frequency bins accommodate variable rate traffic, Tiedemann suggests that the bandwidth utilized by a reverse

traffic channel will vary over time. Thus, the bandwidth allocations of the forward and reverse links will also vary over time. And by associating multiple reverse packet channels with a single forward packet channel, it is clear that bandwidth is allocated differently on the reverse link and the forward link.

3. Applicant also argues on page 8 that "Examiner has admitted that Tiedemann does not show this in the Office Action dated June 27, 2003 where the Office Action stated "Tiedemann in view of Proctor possibly does not expressly disclose that the forward link frequency bins and reverse link frequency bin are designated such that bandwidth of the forward link is allocated differently from bandwidth of the reverse link" (Response: page 8, lines 23-27). Examiner submits that although Examiner previously did not find passages in Tiedemann that taught the aforementioned limitation, upon further review Examiner did find passages in Tiedemann that renders the limitation obvious. Therefore, Examiner maintains that Tiedemann renders the aforementioned limitation obvious, even though Examiner did not previously believe this to be the case.

4. On pages 9-11 of the Response, Applicant argues that "Illidge does not teach or suggest these missing claim elements, namely 'designating a multi-carrier forward link having a plurality of forward link frequency bins' or 'the forward link frequency bins and the at least one reverse frequency bin are designated such that bandwidth of the forward link can be allocated differently from bandwidth of the reverse link'" (Response: page 9, lines 8-12). Examiner submits that, as outlined in the preceding arguments, Tiedemann teaches that the forward link frequency bins and the at least one reverse frequency bin are designated such that bandwidth of the forward link can

be allocated differently from bandwidth of the reverse link, and therefore Illidge is not intended to teach this limitation.

5. Examiner also submits that Illidge teaches "designating a multi-carrier forward link" (Tiedemann teaches that the forward link has a plurality of forward link frequency bins). Illidge teaches that it is known to have a multi-carrier system in order to increase the capacity of the system (col. 1, lines 9-21). Applicant seems to argue that a mobile station tunes into a single carrier in Illidge, and therefore Illidge does not teach a multi-carrier system. Applicant's argument fails to persuade. The mobile is being assigned to a particular carrier because there are multiple carriers in the system. The claim limitation does not specify that a mobile station must be receptive to multiple carriers simultaneously. The claim limitation only specifies that the forward link contains multiple carriers. Thus, Illidge teaches that it is known to have a multi-carrier forward link in order to increase the capacity of the system.

6. Given the above arguments, Examiner maintains that the cited prior art renders claim 10, 17, and 20, and by extension claims 11-16, 18, 19, and 21-28, obvious. Applicant is encouraged to add limitations to the claims in order to distinguish the claims from the prior art.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 10-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedemann, Jr. (USPN 5,604,730) in view of Illidge (USPN 6,101,394).

9. Regarding claims 10, 17, and 20, Tiedemann discloses a method and apparatus in a wireless communication system, the method comprising steps of and the apparatus comprising means for: designating a forward link having a plurality of forward link frequency bins (forward packet channel) (Fig. 7 and col. 5, lines 16-26); and designating a reverse link having at least one reverse link frequency bin (reverse packet channels) (Fig. 8 and col. 5, lines 27-38), wherein the forward link frequency bins and the at least one reverse link frequency bin are designated such that bandwidth of the forward link is allocated differently from bandwidth of the reverse link (col. 5, lines 1-5 and col. 5, lines 31-39). Tiedemann does not disclose that the forward link is a multi-carrier forward link. Illidge teaches, in a CDMA system, using a multi-carrier forward link in order to increase the capacity of the system (col. 1, lines 9-21). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a multi-carrier forward link in order to increase the capacity of the system.

10. Regarding claims 11, 18, and 21, referring to claims 10, 17, and 20, Tiedemann in view of Illidge discloses selecting a first forward link frequency bin from the plurality of forward link frequency bins for forward link transmission (Tiedemann: col. 5, lines 1-63), the first forward link frequency bin having an associated first reverse link frequency bin (Tiedemann: col. 5, lines 1-63); and selecting a second reverse link frequency bin for reverse link transmission corresponding to the forward link transmission wherein the second reverse link frequency bin is different from the first reverse link frequency bin (Tiedemann: col. 5, lines 1-63).

11. Regarding claim 12, referring to claim 11, Tiedemann in view of Illidge implicitly disclose that the selecting a second reverse link frequency bin is based on loading of the system (Tiedemann: col. 1, lines 48-58 and col. 5, lines 16-45).

12. Regarding claim 13, referring to claim 11, Tiedemann in view of Illidge discloses selecting a third reverse link frequency bin for reverse link transmission corresponding to the forward link transmission, wherein the third reverse link frequency bin is different from the first and second reverse link frequency bins (Tiedemann: col. 5, lines 1-63) where "one or more reverse packet channels" includes three packet channels.

13. Regarding claim 14, referring to claim 10, Tiedemann in view of Illidge discloses that the plurality of frequency bins comprises a number of frequency bins (Tiedemann: Fig. 7 and col. 5, lines 16-26). Tiedemann in view of Illidge does not expressly disclose that the plurality of forward link frequency bins comprise three frequency bins. However, it is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Tiedemann in view of Illidge disclose that the plurality of frequency bins comprises a number of frequency bins, it would have been obvious to have the number of frequency bins be any number of bins, including three bins, absent a showing of criticality by Applicant.

14. Regarding claim 15, referring to claim 10, Tiedemann in view of Illidge discloses that the plurality of forward link frequency bins are adjacent frequency bins (Tiedemann: Fig. 7 and col. 5, lines 1-46) where the frequency bins are adjacent in time.

15. Regarding claim 16, referring to claim 11, Tiedemann in view of Illidge discloses that the multi-carrier forward link is adapted for transmission of a plurality of code channels (Tiedemann: col. 5, lines 16-26), wherein one of said plurality of code channels is used to communicate power control information for said second reverse link frequency bin (Tiedemann: col. 6, lines 56-61) where a code channel and a frequency bin are equivalent.

16. Regarding claim 19, referring to claim 18, Tiedemann in view of Illidge discloses receiving by the first device an indication of a reverse link frequency bin (Tiedemann: col. 5, lines 31-46) where the overhead message contains an indication of a reverse frequency bin.

17. Regarding claim 22, referring to claim 10, Tiedemann in view of Illidge does not expressly disclose that that the designations of the forward and reverse link includes allocating more bandwidth for the forward link than the reverse link. However, Tiedemann in view of Illidge discloses that the forward link includes control information, such as synchronization, in addition to individual channel information while the reverse link only includes individual channel information (Tiedemann: Figs. 7 and 8 and col. 5, lines 1-63). It would have been obvious to one of ordinary skill in the art at the time of the invention to allocate more bandwidth for the forward link than the reverse link in order to ensure that the forward link contains enough bandwidth for control information.

18. Claims 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedemann, Jr. (USPN 5,604,730) in view of Illidge (USPN 6,101,394) as applied to claim 10 above, and further in view of Applicant's admitted prior art.

19. Regarding claim 23, referring to claim 10, Tiedemann in view of Illidge does not disclose that the designation of the forward link includes configuring the forward link as a cdma2000 3X

forward link. Applicant discloses that cdma2000 3X forward links are well known in the art since cdma2000 expands "the capabilities of the preceding technologies to include wireless e-mail, Web browsing, and corporate and local network access, as well as videoconferencing, e-commerce and multimedia" (page 4, lines 1-page 6, line 8). It would have been obvious to one of ordinary skill in the art at the time of the invention to configure the forward link as a cdma2000 3X forward link in order to allow the wireless system to expand the capabilities of the preceding technologies.

20. Regarding claim 24, referring to claim 23, Tiedemann in view of Illidge in further view of Applicant's admitted prior art discloses that the forward link includes first, second, and third carriers (Illidge: col. 1, lines 9-21 and Applicant: page 4, lines 1-page 6, line 8 and Applicant: page 4, lines 1-page 6, line 8).

21. Regarding claim 25, referring to claim 24, Tiedemann in view of Illidge in further view of Applicant's admitted prior art suggests that the first, second, and third carriers occupy first, second, and third adjacent frequency bins, respectively (Tiedemann: col. 5, lines 16-45 and Applicant: page 4, lines 1-page 6, line 8).

22. Regarding claim 26, referring to claim 25, Tiedemann in view of Illidge in further view of Applicant's admitted prior art suggests that the designation of the reverse link includes configuring the reverse link as a cdma2000 1X reverse link (Tiedemann: col. 5, lines 16-45 and Applicant: page 4, lines 1-page 6, line 8).

23. Regarding claim 27, referring to claim 26, Tiedemann in view of Illidge in further view of Applicant's admitted prior art discloses that the reverse link includes a fourth carrier (Tiedemann: col. 5, lines 16-45 and Applicant: page 4, lines 1-page 6, line 8).

24. Regarding claim 28, referring to claim 27, Tiedemann in view of Illidge in further view of Applicant's admitted prior art suggests that the fourth carrier is located in a frequency range similar to the second frequency bin (Tiedemann: col. 5, lines 16-45 esp. col. 5, lines 31-38 and Applicant: page 4, lines 1-page 6, line 8).

***Conclusion***

25. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel J. Ryman
Examiner
Art Unit 2665

Daniel J. Ryman DJR2

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600